

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P883980

Luminaire Tested: **NAV-SB4C-827-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883980
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4C-827-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18671 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

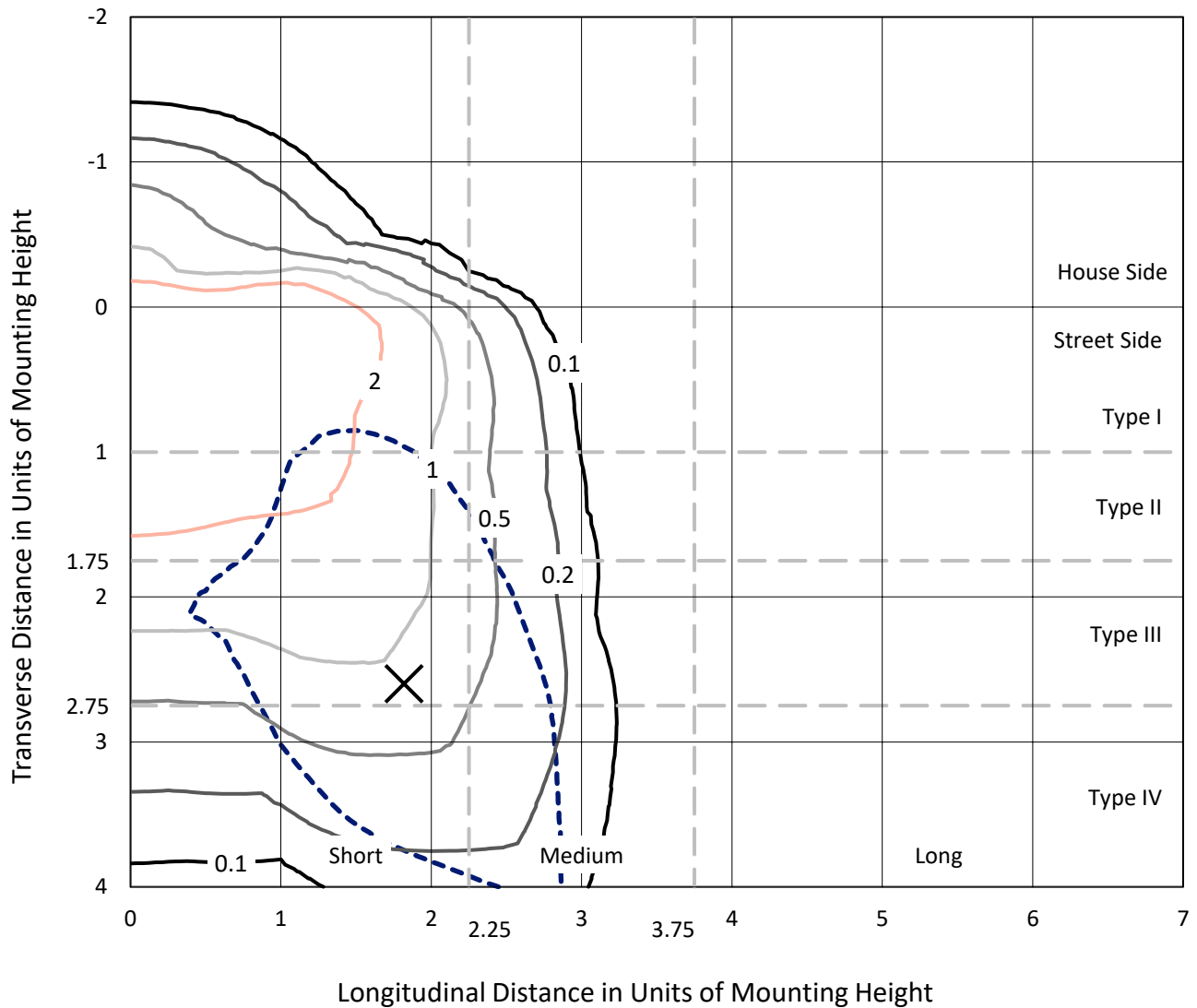
Input Watts (W): 200.7
Input Voltage (V): 120.0
Input Current (Ain): 1.714
Voltage Rise (V): NR
Power Factor: 0.994
Total Harmonic Distortion (THDi): 9.472
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

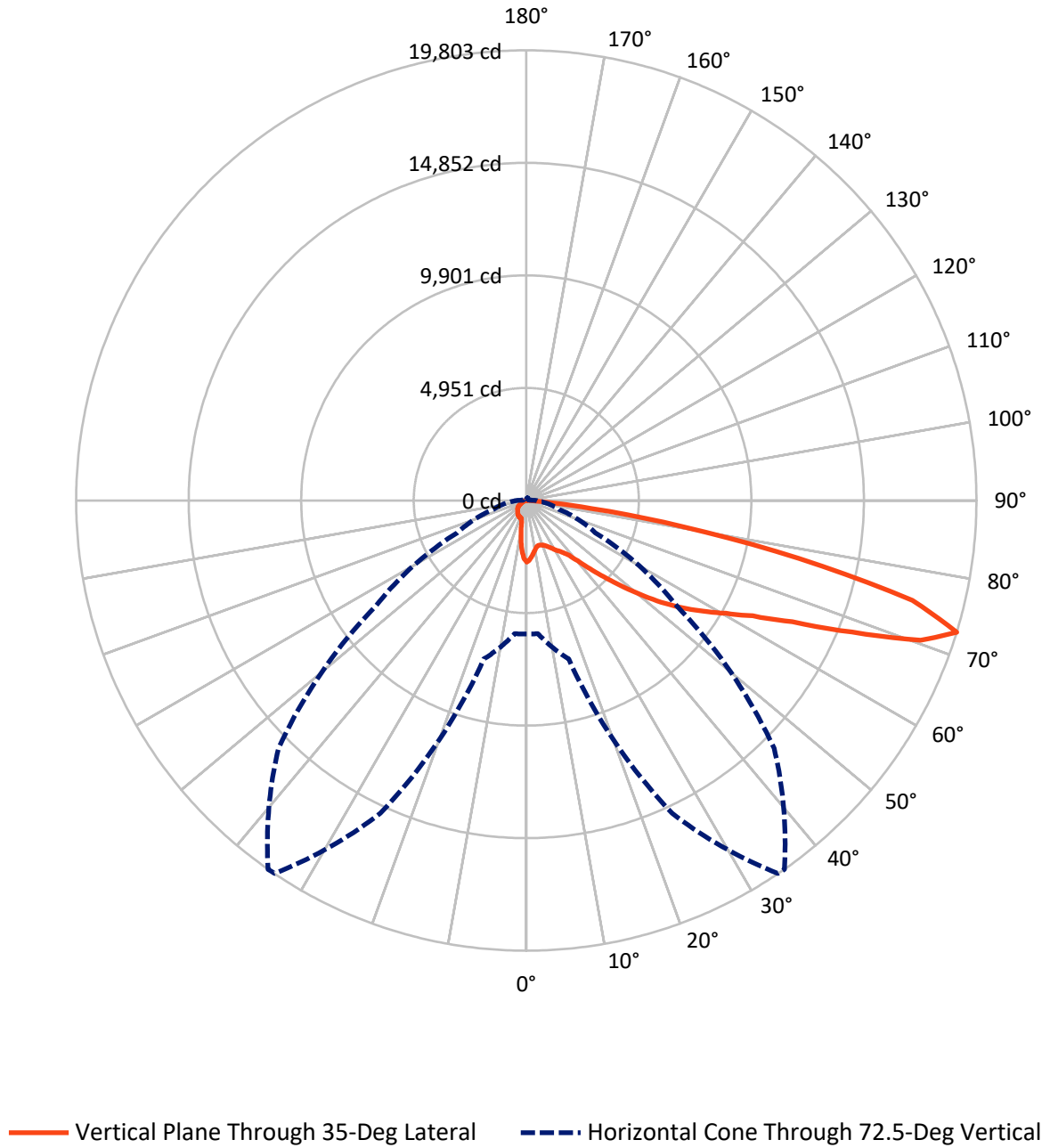
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2101.3	0.0	2101.3
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	16569.7	0.0	16569.7
	% Fixture	88.7	0.0	88.7
Total	Lumens	18671.0	0.0	18671.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.4	1.2
10°-20°	520.2	2.8
20°-30°	845.0	4.5
30°-40°	1410.0	7.6
40°-50°	2667.7	14.3
50°-60°	4238.9	22.7
60°-70°	5243.8	28.1
70°-80°	3259.6	17.5
80°-90°	263.4	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	18671.0	100.0
0°-180°	18671.0	100.0

Coefficient of Utilization



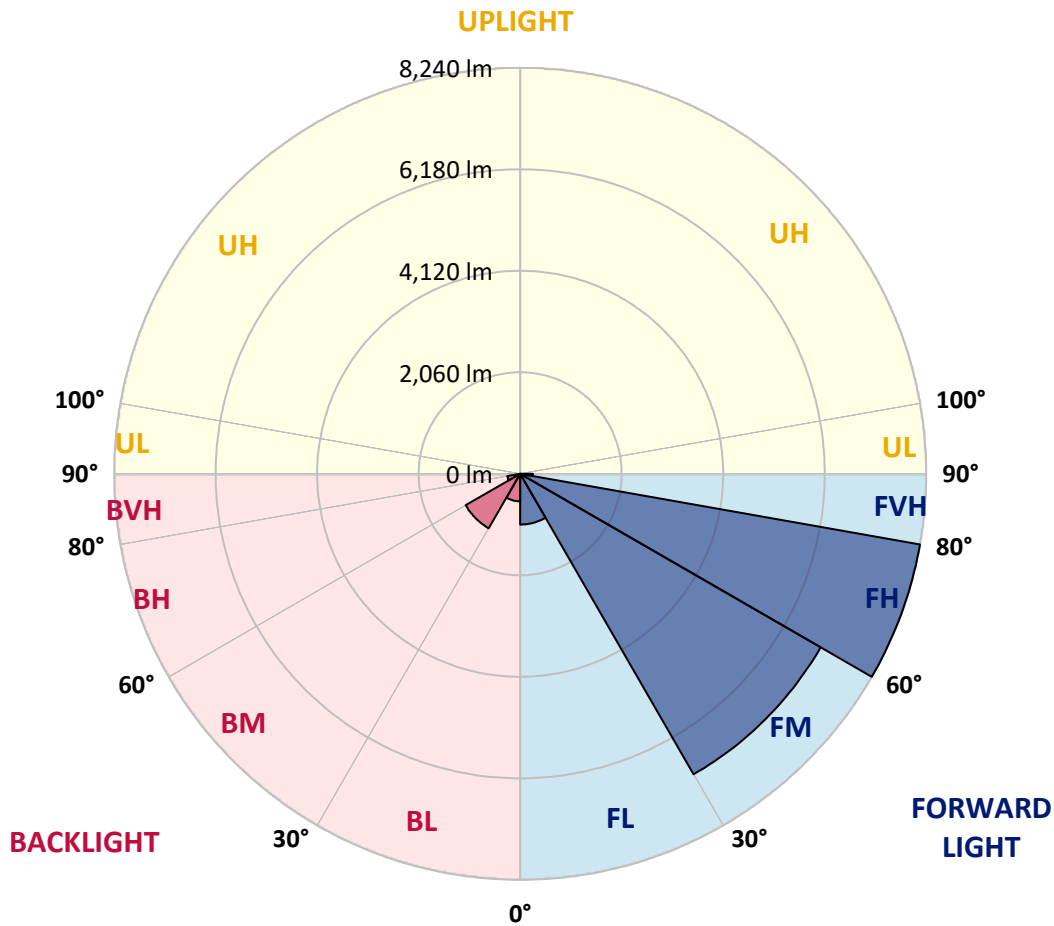
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1029.2	5.5			
FM (30°-60°)	7040.8	37.7			
FH (60°-80°)	8239.7	44.1			G4/12000
FVH (80°-90°)	259.8	1.4			G3/500
BL (0°-30°)	558.4	3.0	B2/1000		
BM (30°-60°)	1275.7	6.8	B2/2500		
BH (60°-80°)	263.7	1.4	B1/500		G1/500
BVH (80°-90°)	3.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1
2.5°	2585.7	2607.6	2611.7	2618.5	2618.5	2626.7	2640.4	2659.5	2691.0	2707.4	2718.4
5°	2383.2	2399.6	2420.1	2436.5	2468.0	2472.1	2525.5	2577.5	2650.0	2704.7	2743.0
7.5°	2179.3	2198.5	2225.9	2265.5	2306.6	2318.9	2399.6	2487.2	2602.1	2704.7	2769.0
10°	2035.7	2037.1	2061.7	2101.4	2167.0	2182.1	2280.6	2405.1	2548.7	2688.3	2793.6
12.5°	1955.0	1964.6	1975.5	2005.6	2068.5	2078.1	2183.4	2329.8	2495.4	2678.7	2822.3
15°	1955.0	1961.8	1968.7	1983.7	2034.3	2042.5	2135.6	2282.0	2468.0	2682.8	2868.9
17.5°	1975.5	1986.4	1981.0	1998.8	2052.1	2057.6	2139.7	2268.3	2466.6	2708.8	2940.0
20°	2024.8	2033.0	2022.0	2033.0	2086.3	2097.3	2182.1	2294.3	2489.9	2753.9	3028.9
22.5°	2102.7	2106.8	2080.8	2089.1	2143.8	2157.5	2256.0	2368.1	2546.0	2826.4	3147.9
25°	2201.2	2209.4	2169.8	2179.3	2231.3	2247.7	2361.3	2479.0	2634.9	2926.3	3299.8
27.5°	2314.8	2318.9	2284.7	2283.3	2350.4	2373.6	2488.5	2615.8	2753.9	3052.2	3491.3
30°	2444.8	2457.1	2424.2	2418.8	2503.6	2522.7	2636.3	2784.0	2929.1	3241.0	3763.6
32.5°	2547.4	2556.9	2537.8	2551.5	2637.7	2652.7	2815.5	3022.1	3204.0	3509.1	4134.3
35°	2695.1	2700.6	2656.8	2681.4	2779.9	2818.2	3060.4	3355.9	3550.2	3845.7	4618.6
37.5°	3230.0	3230.0	3044.0	2922.2	3016.6	3050.8	3395.6	3775.9	3977.0	4297.1	5228.8
40°	3970.2	3957.8	3685.6	3436.6	3424.3	3491.3	3873.0	4305.3	4528.3	4838.9	5915.6
42.5°	4759.5	4740.4	4369.6	4123.4	4082.3	4105.6	4424.4	4957.9	5185.0	5499.7	6654.3
45°	5460.0	5454.5	5115.2	4784.2	4710.3	4784.2	5112.5	5721.3	5884.1	6215.2	7391.7
47.5°	6046.9	6046.9	5799.3	5583.1	5544.8	5588.6	6044.2	6568.1	6553.1	6977.2	8110.0
50°	6722.7	6717.3	6481.9	6388.9	6428.6	6490.2	7116.7	7460.1	7245.3	7725.5	8751.6
52.5°	7196.1	7228.9	7148.2	7133.1	7335.6	7442.3	8205.7	8332.9	7865.1	8435.6	9231.8
55°	7570.9	7609.2	7702.3	7807.6	8197.5	8337.1	9260.5	9160.6	8383.6	9051.2	9508.1
57.5°	8101.7	8047.0	8190.7	8398.6	9029.3	9197.6	10282.5	9941.8	8800.8	9550.5	9538.2
60°	8746.1	8754.3	8778.9	9041.6	9859.7	10075.9	11289.4	10680.6	9069.0	9857.0	9204.4
62.5°	9520.4	9532.8	9583.4	9987.0	10974.7	11178.5	12361.9	11285.3	9192.1	9770.8	8342.5
65°	9467.1	9519.1	10084.1	11464.5	12669.7	12870.9	13613.7	11709.4	9006.0	8982.8	6792.5
67.5°	8624.3	8709.2	9654.5	13229.3	15225.3	15449.7	15126.8	11792.8	8203.0	6985.4	4431.2
70°	7518.9	7549.0	8685.9	14816.3	18184.5	18411.6	16481.2	10874.8	6224.7	3896.3	1985.1
72.5°	5871.8	5878.6	7212.5	15184.3	19790.6	19802.9	15418.2	8073.0	3347.7	1496.7	689.5
75°	4194.5	4153.5	4830.7	12314.1	17411.5	17551.0	11558.9	3786.8	1279.2	707.3	343.4
77.5°	2249.1	2294.3	2733.4	7302.8	12028.1	12266.2	6306.8	1091.7	651.2	481.6	227.1
80°	695.0	733.3	1120.5	3343.6	6813.0	6956.7	2338.0	485.7	454.2	343.4	149.1
82.5°	218.9	227.1	522.6	1405.0	2827.8	2893.5	677.2	275.0	310.6	227.1	87.6
85°	62.9	64.3	232.6	524.0	699.1	712.8	190.2	106.7	177.8	140.9	45.1
87.5°	6.8	21.9	87.6	87.6	61.6	60.2	20.5	23.3	50.6	17.8	8.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1	2706.1
2.5°	2711.5	2712.9	2695.1	2665.0	2632.2	2604.8	2570.6	2543.3	2524.1	2518.6	2528.2
5°	2730.7	2721.1	2670.5	2578.8	2469.4	2375.0	2269.6	2186.2	2131.5	2108.2	2116.4
7.5°	2759.4	2732.0	2621.2	2440.6	2231.3	2045.3	1856.5	1710.1	1617.1	1570.6	1577.4
10°	2784.0	2729.3	2539.1	2240.9	1920.8	1639.0	1384.5	1208.0	1109.5	1063.0	1064.4
12.5°	2807.3	2727.9	2432.4	2004.2	1570.6	1225.8	989.1	901.6	874.2	864.6	861.9
15°	2851.1	2732.0	2298.4	1733.4	1221.7	926.2	840.0	838.6	844.1	841.4	840.0
17.5°	2911.3	2736.2	2146.5	1446.1	942.6	816.7	812.6	824.9	833.2	829.1	827.7
20°	2989.2	2752.6	1985.1	1161.5	809.9	789.4	799.0	809.9	816.7	809.9	808.5
22.5°	3098.7	2781.3	1808.6	933.0	767.5	773.0	781.2	793.5	800.3	790.7	789.4
25°	3232.8	2826.4	1634.9	811.3	747.0	753.8	766.1	779.8	788.0	778.4	777.1
27.5°	3406.5	2899.0	1474.8	783.9	726.4	730.6	748.3	768.9	779.8	767.5	767.5
30°	3658.2	3018.0	1336.6	796.2	714.1	704.6	729.2	757.9	770.2	759.3	757.9
32.5°	3992.0	3186.2	1251.8	815.4	708.7	674.5	697.7	734.7	755.2	748.3	748.3
35°	4429.8	3442.1	1219.0	837.3	704.6	643.0	659.4	699.1	734.7	741.5	741.5
37.5°	4960.6	3797.8	1228.5	846.8	692.2	617.0	625.2	659.4	705.9	727.8	733.3
40°	5564.0	4212.3	1283.3	837.3	678.6	595.1	596.5	622.5	663.5	696.4	707.3
42.5°	6186.4	4696.6	1384.5	801.7	666.3	576.0	571.9	589.6	617.0	640.3	649.8
45°	6778.8	5194.6	1484.4	752.4	651.2	556.8	547.2	554.1	559.5	569.1	574.6
47.5°	7295.9	5544.8	1455.6	707.3	630.7	534.9	518.5	515.8	499.3	498.0	496.6
50°	7653.0	5621.4	1292.8	662.1	600.6	510.3	484.3	467.9	439.2	425.5	426.8
52.5°	7766.6	5319.1	1056.2	617.0	551.3	477.5	440.5	414.5	379.0	366.6	365.3
55°	7616.1	4726.7	844.1	562.3	482.9	433.7	392.6	358.4	329.7	314.7	314.7
57.5°	7248.1	3972.9	667.6	498.0	410.4	384.4	343.4	309.2	284.6	269.5	266.8
60°	6637.9	3154.8	528.1	421.4	350.2	331.1	288.7	266.8	244.9	227.1	223.0
62.5°	5711.7	2251.9	414.5	333.8	292.8	270.9	246.3	229.8	203.8	179.2	175.1
65°	4457.2	1377.7	320.1	244.9	235.3	224.4	209.3	194.3	162.8	138.2	134.1
67.5°	2811.4	652.6	228.5	184.7	186.1	180.6	173.7	161.4	138.2	116.3	113.6
70°	1238.1	316.0	150.5	140.9	138.2	138.2	143.6	139.5	117.7	97.1	93.0
72.5°	421.4	169.6	112.2	106.7	99.9	98.5	120.4	116.3	94.4	75.2	71.1
75°	220.3	113.6	82.1	76.6	60.2	72.5	95.8	90.3	67.0	49.3	45.1
77.5°	143.6	80.7	56.1	49.3	34.2	47.9	71.1	62.9	39.7	24.6	21.9
80°	90.3	53.4	32.8	23.3	16.4	26.0	38.3	27.4	15.0	5.5	4.1
82.5°	47.9	27.4	12.3	8.2	6.8	8.2	9.6	6.8	2.7	0.0	0.0
85°	19.2	9.6	4.1	2.7	1.4	0.0	2.7	1.4	0.0	0.0	0.0
87.5°	6.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)